

Remarks

Applicants respectfully request that the above amendments be entered after final as they place the claims in better form for allowance.

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 35, 36, 42 and 45-47 are pending in the application, with 35 and 42 being the independent claims. Claims 38, 43, 48 and 51 are sought to be cancelled without prejudice to or disclaimer of the subject matter therein. Support for the amendments can be found in the specification at page 32, line 15-page 33, line 2; page 20, line 17-19; page 14, line 28 - page 15, line 2, Figure 6 and throughout the specification. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 112

The Examiner has rejected claims 35, 36, 38, 43 and 45-48 under 35 U.S.C. § 112, first paragraph for alleged lack of enablement. The Examiner states that "[t]he specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope

with these claims." *See* Paper No. 15, page 3. Applicants respectfully traverse this rejection.

The Examiner argues that "[t]he instant claims encompass an isolated DNA molecule comprising any DNA sequence encoding at least 400 amino acids of a JAK3 kinase peptide of SEQ ID NO:16...." *See* Paper No. 15, page 4. Solely in an effort to expedite prosecution and without acquiescence in the propriety of rejection, Applicants have amended claim 35, from which claims 36, 45 and 47 depend, to recite "[a]n isolated DNA molecule comprising a DNA sequence encoding **400 contiguous amino acids or less** of a Jak 3 peptide of SEQ ID NO:16." Thus, this aspect of the rejection is now moot.

The Examiner also argues that the "specification fails to teach specifically which JAK3 kinase peptides derived from which encoded regions of the full-length JAK3 kinase of SEQ ID NO:16 and which critical regions or domains of the JAK3 kinase that a JAK3 kinase peptide needs to possess in order have [sic] JAK kinase activity and undergoes [sic] tyrosine phosphorylation...." (Paper No.15, page 4-5) Applicants disagree. Solely in an effort to expedite prosecution, however, and without acquiescence in the propriety of rejection, Applicants have amended claims 35 and 42 to specify regions of the Jak3 protein which contain "the sequence of SEQ ID NO:15 which includes the Jak3 autophosphorylation site."

Furthermore, the Examiner has argued that "[i]n order for a JAK3 kinase peptide or any JAK kinase peptide to be to activated or undergoing [sic] tyrosine phosphorylation or having cytokine receptor binding by one of the recited cytokines, one of skill in the art needs to know exactly which domains or regions of the JAK3 kinase molecule are

responsible for binding to any receptor of the recited group of cytokines...." *See* Paper No. 15, page 5. Applicants disagree that one of skill in the art is required to know exactly which domains or regions of the JAK3 kinase molecule are responsible for receptor binding.

In any event, solely in an effort to expedite prosecution, and without acquiescence in the propriety of rejection, Applicants have amended claims 35, 45 and 47 such that the Examiner's concerns should no longer be an issue. The amendments to the claims are believed to address the Examiner's comments at the top of page 8 of the Office Action because the language relating to the kinase activity and phosphorylation mediated by one of the members of the list of receptors has been deleted. Furthermore, claim 35 now also requires a specific DNA sequence within the DNA encoding 400 contiguous amino acids or less of SEQ ID NO:16. This is the nucleic acid sequence encoding the amino acid sequence of SEQ. ID NO:15. Thus, one of skill in the art would know exactly the sequence of some of the amino acids that must be encoded by the claimed DNA. Additionally, the claimed DNA molecule must also include the Jak3 autophosphorylation site. Based on this amendment, undue experimentation would *not* have been required to practice the claimed invention.

The rejection is moot as it applies to claims 38, 43, 48 and 51. These claims have been cancelled without prejudice or disclaimer. Thus, in light of the above amendments Applicants respectfully request the withdrawal of this rejection as it applies to pending claims 35, 36, 45, 46 and 47.

Obviousness-Type Double Patenting Rejection

The Examiner has rejected claims 42 and 51 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,136,595. The rejection of claim 51 is moot as Applicants have cancelled claim 51 without prejudice or disclaimer.

Solely in an effort to expedite prosecution, and without acquiescence in the propriety of rejection, Claim 42 has been amended to recite "[a]n isolated DNA molecule, wherein said DNA molecule hybridizes to a DNA sequence encoding amino acids of a Jak3 peptide of SEQ ID NO: 16, wherein said peptide contains the sequence of SEQ ID NO:15, which includes the Jak3 autophosphorylation site" under specific hybridization conditions. The amended claim would not be obvious in view of claims 1-6 of U.S. Patent No. 6,136,595. Therefore, this rejection is overcome and should be withdrawn.

Conclusion

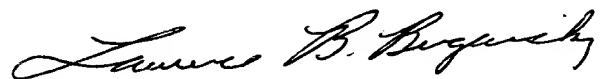
All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will

expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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Version with markings to show changes made

Claims 38, 43, 48 and 51 have been cancelled.

Claim 35 has been amended as follows:

35. (Twice Amended) An isolated DNA molecule comprising a DNA sequence encoding [at least] 400 contiguous amino acids or less of a Jak 3 [kinase] peptide of SEQ ID NO:16, wherein said peptide contains the sequence of SEQ ID NO:15 which includes the Jak3 autophosphorylation site [has Jak kinase activity and undergoes tyrosine phosphorylation by at least one cytokine selected from the group consisting of IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-9, IL-11, OSM, LIF, G-CSF, EPO, IFN- γ and GM-CSF].

Claim 42 has been amended as follows:

42. (Once Amended) An isolated DNA molecule, wherein said DNA molecule hybridizes to a DNA sequence encoding amino acids of a Jak3 peptide of [acid] SEQ ID NO: 16, wherein said peptide contains the sequence of SEQ ID NO:15, which includes the Jak3 autophosphorylation site and wherein said hybridization is done at 65° C in 750 mM NaCl and a final washing is done at 65° C in 15 mM NaCl [, wherein said isolated

DNA sequence encodes a polypeptide having Jak kinase activity and a tyrosine that is phosphorylated following IL-2 or IL-4 stimulation].

Claim 45 has been amended as follows:

45. (Once Amended) An expression vector, comprising the isolated DNA molecule of claim 35 wherein said vector expresses said Jak3 peptide [Jak kinase] in a host cell.

Claim 47 has been amended as follows:

47. (Once Amended) The isolated DNA molecule of claim 35, wherein said molecule encodes a Jak3 [kinase] polypeptide that is at least 80-99% homologous to the amino acid sequence of SEQ ID NO: 16, wherein the percent homology is determined by comparing sequence information using a GAP computer program having the default parameters of (1) a unary comparison matrix (containing a value of 1 for identities and 0 for non-identities), (2) a penalty of 3.0 for each gap and an additional 0.10 penalty for each symbol in each gap, and (3) no penalty for end gaps.